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10/537,783	06/06/2005	Claus August Bolza-Schunemann	W1.2041 PCT-US	4615

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01/28/2008

EXAMINER

ZIMMERMAN, JOSHUA D

ART UNIT	PAPER NUMBER
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2854

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,783

Applicant(s)

BOLZA-SCHUNEMANN, CLAUS
AUGUST

Examiner

Joshua D. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 102, 104, 106, 107, 109-112 and 116-127 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 102, 104, 106, 107, 109-112 and 116-127 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 102, 106, 110, 111, 116, 118, 121, and 122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo (JP 01,232,045) in view of Preuss et al. (US 3688694).

Regarding claim 102, Tsuneo teaches "a method for controlling rollers in a dampening agent roller train of a printing unit (abstract) including:
providing a source of a dampening agent (see the source of dampening solution which is in contact with item 2 in the figure);

providing a first roller having a first roller surface adapted for taking up a dampening agent from said source of dampening agent (item 2);

providing a second roller having a second roller surface contacting said first roller surface and receiving said dampening agent directly from said first roller surface (item 3);

providing a forme cylinder having a forme cylinder surface speed of rotation (item 8);

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including said first and said second rollers in a roller train usable for conveying said dampening agent to said forme cylinder (see the configuration of items 2 and 3 in the figure);

providing a first roller drive motor for driving said first roller (item 10);

rotating said first roller at a first roller surface speed using said first roller drive motor (abstract: constitution);

providing a second roller drive motor for driving said second roller at a second roller surface speed independently said first roller (item 11);

controlling each of said first roller drive motor and said second roller drive motor independently (abstract: constitution);

rotating said second roller at said second roller surface speed using said second drive motor (abstract: constitution)."

Tsuneo fails to specifically teach:

"providing a forme cylinder drive motor;" said motor being controlled independently of said first and second motors, and "using said forme cylinder drive motor and rotating said forme cylinder at said forme cylinder surface speed of rotation."

However, Tsuneo does teach that the plate cylinder has its own speed of rotation, which is independent from rollers 2 and 3 (Abstract: constitution) and one having ordinary skill in the art would recognize that the plate cylinder of Tsuneo would be provided with a motor to rotate it at its own speed of rotation.

Tsuneo also fails to teach:

"that the second roller is rotated at a speed different than the first roller speed;

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selecting said second roller surface speed being greater than said first roller surface speed;

selecting both said first roller surface speed and said second roller surface speed being less than said forme cylinder surface speed of rotation;

setting both of said first roller surface speed and said second roller surface speed as a function of said forme cylinder surface speed;

selecting a slippage between said first roller surface and said second roller surface by said controlling of each of said first roller drive motor and said second roller drive motor independently, said selected slippage resulting from said difference between said first roller surface speed and said second roller surface speed which is greater than said first roller surface speed;

controlling said selected slippage between said first roller surface and said second roller surface, using said first and second drive motors;

setting said selected slippage between said first roller surface and said second roller surface as a function of said forme cylinder surface speed; and

controlling an amount of said dampening agent supplied to said forme cylinder using said roller train by controlling said selected slippage between said first roller surface and said second roller surface as said function of said forme cylinder surface speed;

providing said first roller surface speed at less than 2 m/s."

Regarding the limitation of setting the first roller surface speed at less than 2 m/s, one having ordinary skill in the art would recognize that changing speed of the first roller

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results in changing the amount of dampening solution applied to the form cylinder. It has been held that it is not inventive to discover the optimum or workable ranges of a process by routine experimentation. It would have been obvious to one of ordinary skill in the art at the time of the invention, through routine experimentation, to provide "first roller surface speed at less than 2 m/s" in order to achieve an optimum amount of dampening solution on the form cylinder, and/or to prevent spraying or splattering of dampening water during take-up.

Preuss et al. disclose a dampening device with a roller train with a first roller and a second roller (figure 1, abstract), and a plate cylinder driven separately from the first and second rollers (column 6, lines 2-3). Preuss et al. teach rotating the second roller at a speed higher than the first roller in order to create a slippage and to more accurately control the flow of dampening fluid (column 2, lines 10-19). Preuss et al. also teach controlling the slippage by regulating the speed differential between the first and second rollers (column 2, lines 23-26). Finally, Preuss et al. teach changing the dampening solution supply by said slippage regulation in response to the speed of said forme cylinder (column 2, lines 40-47). The method of Preuss et al. results in a greatly improved uniformity of the flow of dampening fluid (column 1, lines 63-68). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to modify the method of Tsuneo by rotating the second roller at a speed higher than the first roller in order to create a slippage, and, further, to control the slippage, using the independent motors of Tsuneo, in accordance with an operating condition of

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the forme cylinder by regulating the speed differential between the first and second rollers in order to improve the uniformity of flow of dampening fluid.

The limitation of "setting both of said first roller surface speed and said second roller surface speed as a function of said forme cylinder speed" is met by the method of Preuss et al. since Preuss et al. teach changing the dampening solution supply by changing the slippage (column 2, lines 15-19) which is controlled by changing the speeds of both first and second rollers (column 2 lines 23-26) and that the dampening solution supplied is a function of the forme cylinder speed (column 2, lines 40-46). The act of "selecting a slippage" is inherent in the process as one must inherently select a slippage which results in a desired amount of dampening solution being applied to the forme cylinder.

Finally, while neither Tsuneo nor Preuss et al. specifically teach "rotating said forme cylinder at a forme cylinder speed and selecting said first roller surface speed and said second roller surface speed both being less than said forme cylinder speed," Preuss et al. teach that all three cylinders are rotated independently, as discussed above. Preuss et al. further teach that the surface speeds of the first and second rollers are set independently of the forme cylinder in order to control the amount of dampening solution provided to the forme cylinder; for example, more is provided at startup, and less is provided at higher press speeds (column 2, lines 40-47). Inherently, in the latter example, the first and second rollers need lower speeds. Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to set the surface speeds of the first and second rollers lower than the surface speed of the forme

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cylinder in order to provide less dampening solution to the forme cylinder when less solution is required by the printing process. It is noted that the steps of "selecting" are inherent steps in the method of Preuss et al. since one must inherently 'select' a speed in order to rotate the cylinders.

Regarding claim 106, Tsuneo as modified does not specifically teach "selecting an amount of ink required for printing using said forme cylinder and setting said one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers as a function of said amount of ink required." However, one having ordinary skill in the art would recognize that the dampening unit of Tsuneo would be used in a printing process and would further recognize that selecting an amount of ink required for printing is an inherent step in a printing process. One having ordinary skill in the art would also recognize that when more ink is required to print, the amount of dampening solution required would decrease, and thus would change "one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers" in order to change the amount of dampening solution supplied so as not to supply more dampening solution than is necessary.

Regarding claim 110, one having ordinary skill in the art would recognize that the drive motors are capable of being "infinitely variably controlled."

Regarding claim 111, Tsuneo further teaches "further including providing said first and second drive motors being electronically controlled (10', 11')."

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Regarding claim 116, Tsuneo further teaches "further including providing a third roller in said roller train (item 4), locating said third roller after, in a direction of travel of said dampening agent, said second roller and providing a drive between said second roller and said third roller (items 3 and 4 of Tsuneo are frictionally connected)."

Regarding claim 118, items 3 and 4 of Tsuneo are frictionally connected.

Regarding claim 121, Tsuneo further teaches "further including bringing a last roller in said roller train into contact with said forme cylinder by contacting one of a bridge roller and an ink application roller working with said forme cylinder (roller 4)."

Regarding claim 122, Tsuneo further teaches "further including providing a dampening agent reservoir as said dampening agent source and dipping said first roller into said dampening agent reservoir (see roller 2 dipped into the reservoir of the figure)."

2. Claim 109 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al. as applied to claim 102 above, and further in view of D'Heureuse et al. (US 5,101,724).

Regarding claim 109, Tsuneo and Preuss et al. teach all that is claimed, but do not specifically teach "operating said second roller as a traversing roller." D'Heureuse et al. teach using a second roller as a traversing roller because of its 'evening-out action' (column 1, lines 63-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Tsuneo by making the second roller a traversing roller in order to achieve a good 'evening-out action.'

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3. Claims 104, 112, 117, 119 and 120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al. as applied to claims 102 and 116 above, further in view of applicant's admitted prior art (AAPA).

Tsuneo as modified teaches all claimed limitations except the following:

Regarding claim 104, Tsuneo as modified does not specifically teach "further including selecting an ink for use in printing by said forme cylinder, forming a mixture of said ink and said dampening agent, wherein a property of said ink includes an amount of said dampening agent mixed with it and setting said one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers as a function of said property of said ink." However, AAPA teaches a film-type dampening unit (paragraph 6 of applicant's specification). One having ordinary skill in the art would recognize that film-type dampening units use emulsion inks, and would recognize that such systems are used because they decrease the start-up time of a printing press. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the film-type dampening system of AAPA into the modified system of Tsuneo in order to decrease the start-up time of the printing process. Further, one having ordinary skill in the art would recognize that "selecting an ink for use in printing by said forme cylinder, forming a mixture of said ink and said dampening agent, wherein a property of said ink includes an amount of said dampening agent mixed with it" is an inherent step in a printing process using a film-type dampening unit. One having ordinary skill in the art would also recognize that when

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more dampening solution is present in the ink, the amount of dampening solution required would decrease, and thus would be motivated to change "one of said surface speed of at least one of said first and second rollers and said slippage between said first and second rollers as a function of said property of said ink" in order to change the amount of dampening solution supplied so as not to supply more dampening solution than is necessary.

Regarding claim 112, Tsuneo and Preuss et al. fail to specifically teach "further including providing a control console and controlling said first and second drive motors from said control console." However, AAPA teaches the use of a control console in order to control the speeds of two dampening solution rollers in order to control the slippage (paragraph 9 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the control device of AAPA in the modified system of Tsuneo in order to control the slippage between the first and second rollers.

Regarding claim 117, Tsuneo and Preuss et al. fail to teach "further including providing said drive as a gear drive." However, AAPA teaches replacing friction-controlled rollers with a separate drive mechanism to control the speed of the rollers (paragraph 5 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the drive a gear drive in order to better control the speed of the rollers.

Regarding claim 119, Tsuneo and Preuss et al. fail to teach the use of a fourth roller positioned downstream of a roller train. However, AAPA teaches the use of a

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fourth roller to apply dampening solution (paragraph 6 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a fourth roller in the roller train of Tsuneo in order to distribute the dampening solution more evenly.

Regarding claim 120, Preuss et al. further teach "further including setting a slippage between at least one of said second roller and said third roller and said third roller and said fourth roller (column 2, lines 1-19)."

4. Claim 123 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al., as applied to claim 102 above, further in view of Wolff et al. (US 6,314,878).

Regarding claim 123, Tsuneo as modified teaches all that is claimed, including the use of a dampening pan as a dampening solution supply. Tsuneo and Preuss et al. fail to teach "applying said dampening agent to said first roller as finely distributed droplets." Wolff et al. teach using a spray device is an equivalent to using a pan arrangement (column 3, lines 5-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a spray device to apply the agent as "finely distributed droplets" instead of using a pan because they are art-recognized equivalents.

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5. Claims 107 and 124-127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo and Preuss et al. as applied to claim 102 above, and further in view of Sone et al. (US 6,133,563).

Regarding claim 107, Tsuneo and Preuss et al. teach all that is claimed except for specifically teaching two separate operating modes of the dampening unit controlled by a computer. However, Sone et al. teach the use of a dampening unit which adjusts speeds of rollers in order to compensate for the speed of the printing press so that an appropriate amount of dampening solution is applied to the press (column 5, lines 45-65). Sone et al. teach "further including providing a dampening unit having said dampening agent source and said roller train and operating said dampening unit selectively in one of a first operating state (Figure 4, the accelerating region C1 or decelerating region C2: that is, the region below speed S3) and in a second operating state (Figure 4, the normal printing regions above speed S3) wherein in said first operating state, said surface speed of said forme cylinder and said surface speed of said second roller are in a first relation with each other (column 5, lines 54-65, Figure 4) and wherein in said second operating state said surface speed of said forme cylinder and said surface speed of said second roller are in a second relation with each other (column 5, lines 54-65, Figure 4), said first relation and said second relation being different (since the slope of the curves in each section are different, the relationship between the two roller speeds is different)." It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the control method of Sone et al. into the method of Tsuneo in order to provide an appropriate amount of

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dampening solution to the printing press depending upon the needs of the printing press.

Regarding claim 124, Sone et al. further teach "providing a computer and changing one of said surface speed of one of said first and said second roller and said slippage between said first and second roller using said computer (item 20, column 4, lines 45-51, and column 3, lines 53-56)."

Regarding claim 125, Sone et al. further teach "further including selecting a forme cylinder surface speed being the same in both of said first and second operating states (in both figures 4 and 5, for a given printing speed, the speeds of 2, 28 and 32 are constant; the only speed that is different is the speed of the cylinders 22 and 24).

Regarding claim 126, Tsuneo further teaches "further including selecting a first forme cylinder surface speed in said first operating state (in either the accelerating or decelerating regions specified above) and a second forme cylinder surface speed, different from said first forme cylinder surface speed in said second operating state (the normal printing region specified above)."

Regarding claim 127, Tsuneo further teaches "further including providing at least one third roller arranged in said roller train downstream, in a direction of travel of said dampening agent and using said third roller for applying said dampening agent to said forme cylinder (roller 4)."

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are unpersuasive.

7. Applicant's argument that Preuss et al. do not provide two separate motors for the first and second rollers is moot since Preuss et al. are relied upon for teaching controlling the supply of dampening solution by controlling slippage between the two rollers, which is controlled by varying their respective surface speeds.

8. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

9. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

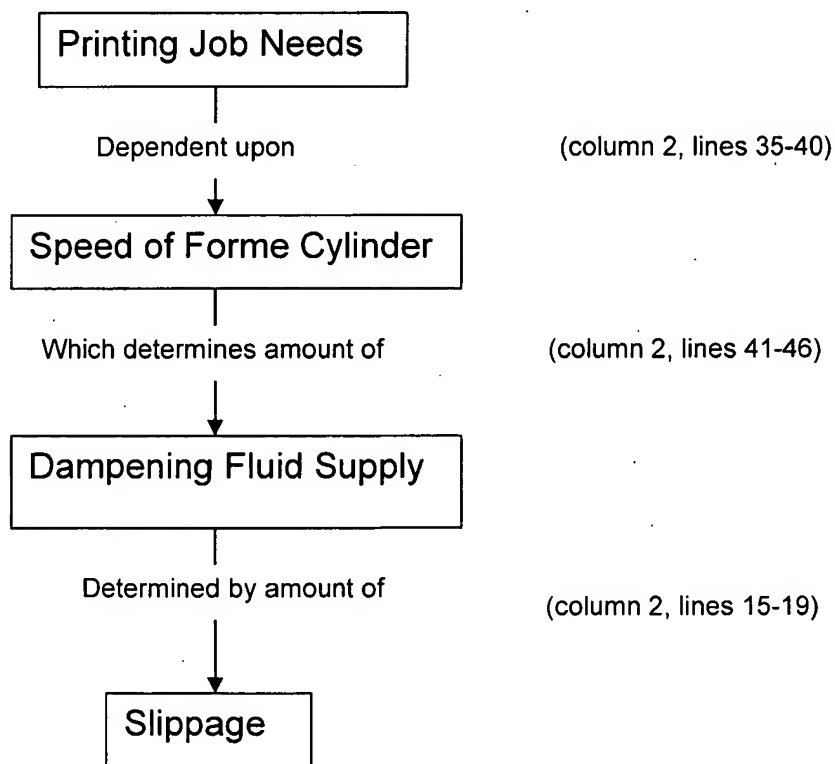
10. In response to applicant's argument that Preuss et al. do not teach setting the slippage as a function of the forme cylinder speed, Examiner offers the following explanation:

Preuss et al. teach changing the dampening fluid supply depending on the needs (that is, the forme cylinder surface speed) of the press (column 2, lines 41-46). Preuss

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et al. further teach controlling the dampening fluid supply by controlling the slippage between the first and second rollers (column 2, lines 15-19). Therefore, Preuss et al. inherently teach (and one having ordinary skill in the art would interpret Preuss et al. as teaching such) controlling (which inherently includes a step of selecting) the slippage between the first and second rollers in order to control the dampening fluid supply in order to meet the demands of the forme cylinder speed.

In simplified form, Preuss et al. teach:



Conclusion

11. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Zimmerman whose telephone number is 571-272-2749. The examiner can normally be reached on M-R 8:30A - 6:00P, Alternate Fridays 8:30A-5:00P.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua D Zimmerman
Examiner
Art Unit 2854

jdz


JUDY NGUYEN
SUPERVISORY PATENT EXAMINER